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| 09/681,425 | 03/30/2001 | Rajaiah Karanam | 03PM-9035 | 3222 |

6152 7590 06/23/2003

PATENT OPERATION
GENERAL ELECTRIC COMPANY
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| EXAMINER |
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CHARIOUL, MOHAMED

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| ART UNIT | PAPER NUMBER |
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2857

DATE MAILED: 06/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,425

Applicant(s)

KARANAM ET AL.

Examiner

Mohamed Charioui

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☒ Claim(s) 13-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figure 2 is objected to because the boxes in the figure are not labeled. Applicant traverses the drawing objection asserting that the drawings are consistent with the requirements set forth in 37 C.F.R. 1.84(p). The Examiner directs the applicant to 37 C.F.R. 1.84(n) and 1.84(o) which state, "Graphical drawing symbols may be used for conventional elements when appropriate" while "[o]ther symbols which are not universally recognized may be used, subject to approval by the Office" and that "[s]uitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing". Since the drawings in Figure 2 do not contain conventional elements, the Examiner may require descriptive legends for better understanding of the drawings. See MPEP 608.02.

Figure 3 is objected to because the numbers in the profile by day, KWH Usage by day, and Demand Graph reports are not clear.

Claim Objections

2. **Claim 13** is objected to because it recites the limitation "The retrofitable power monitoring system". There is insufficient antecedent basis for this limitation in the claim.

The Applicant should change "The retrofitable power monitoring system" to – A retrofitable power monitoring system--

Appropriate correction is required.

Claims 14-21 are objected because they depend on an objected claim 13, for the reasons stated above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-4** are rejected under 35 U.S.C. 102(b) as being anticipated by Turino et al.

As per claim 1, Turino et al. teach a retrofitable power monitoring system (see col. 1, line 62 to col. 2, line 5); an enclosure (col. 15, lines 24-46); at least one current transformer within the enclosure (see col. 11, lines 8-51 and col. 15, line 44 to col. 16, line 9); a meter connected to the current transformer (see col. 15, lines 46-60); a communications device connected to the meter (see col. 8, lines 1-37); and a server connected to the communications device (see col. 6, line 65 to col. 7, line 7).

As per claim 2, Turino et al. further teach that meter stores information related to electrical usage (see col. 8, lines 1-8).

As per claim 3, Turino et al. further teach that communications device periodically sends the electrical usage information from said meter to the server (see col. 8, lines 1-8).

As per claim 4, Turino et al. further teach a software module coupled to the server (see col. 6, line 53 to col. 7, line 11).

4. **Claims 13-36** are rejected under 35 U.S.C. 102(b) as being anticipated by Ehlers et al.

As per claims 13, 22 and 29-32, Ehlers et al. teach a retrofitable power monitoring system (see col. 4, lines 6-9); plurality of electrical usage monitoring devices, each of the plurality of monitoring devices collecting information related to electric usage in a discreet location (see col. 4, lines 6-19); a server connected to communicate with the plurality of monitoring devices (see col. 4, lines 19-65); a database object coupled to the server, the database object storing the electrical usage information received from the plurality of monitoring devices (see col. 17, line 55 to col. 18, line 68); an analysis object coupled to the database for analyzing the electrical usage information (see col. 5, lines 44-55); and, a reporting object coupled to the database object and the analysis object (see Abstract; col. 12, line 3 to col.13, line 11; and figures 29-37).

As per claims 14 and 33, Ehlers et al. further teach a comparator object coupled to the database object, the comparator object periodically comparing the electrical usage information of each of the plurality of monitoring devices and an electrical rate profile (see col. 27, lines 5-56).

As per claims 15-17, Ehlers et al. further teach that the comparator object determines a maximum electrical cost period for each of the plurality of monitoring devices.

As per claim 18-20, Ehlers et al. further teach reporting object provides a recommended electrical usage profile that reduces the cost associated with the maximum electrical cost period for at least one of said plurality of monitoring devices (see col. 27, lines 5-38).

As per claim 21, Ehlers et al. further teach a monitor connected to the server, the reporting object displaying the plurality of reports on the monitor (see col. 11, lines 45-52).

As per claims 23, 25, 26 and 28, Ehlers et al. further teach that the communications device is a wireless type (see col. 24, lines 54-68).

As per claim 24, Ehlers et al. further teach that the communications device transmits the usage information to the server by an infrared signal (see col. 4, lines 20-34).

As per claim 27, Ehlers et al. further teach that the communications device transmits the usage information to the server by an Ethernet network (see col. 4, lines 50-67).

As per claims 34-36, Ehlers et al. further teach that creating an electrical cost profile, analyzing the electrical cost profile and determining a recommended electrical usage profile that minimizes the electrical cost profile (see col. 27, lines .

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turino et al. in view of Ehlers et al.

As per claims 5-12, Turino et al. further teach that the software module includes a database object (see col. 20, lines 5-10 and col. 9, lines 15-20), the database including electrical usage information (see col. 6, lines 53-64).

Turino et al. fail to teach an analysis object coupled to the database for analyzing the electrical usage information.

Ehlers et al. teach this feature (see col. 5, lines 44-55). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ehlers et al.'s teaching into Turino et al.'s invention, because it would analyze the customer power consumption to the smallest detail. Therefore, it would provide a great deal of information that would help the customer to make decision about consuming the power efficiently.

Turino et al. fail to teach reporting object coupled to the database object and the analysis object.

Ehlers et al. teach this feature (see Abstract; col. 12, line 3 to col.13, line 11; and figures 29-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ehlers et al.'s teaching into Turino et al.'s invention, because the analysis of the power consumption would provide the customer with a clear and concise power consumption report that would include different rates applicable at different times of the day and the power consumed by the different loads in the customer site. Therefore, the customer would have a clearer idea of how efficiently the power should be consumed in the site or the premises to save electrical costs.

Turino et al. teach a monitor connected to the server (see Abstract and col. 6, line 53 to col. 7, line 11).

Turino et al. fail to teach reporting object displaying the plurality of reports on the monitor.

Ehlers et al. teach this feature (see col. 11, lines 45-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ehlers et al.'s teaching into Turino et al.'s invention, because the combination would have displayed numerical and graphical data concurrently thereby allowing both skilled and unskilled users to clearly visualize the changing characteristics of the power consumption and indicating how efficiently the power should be consumed in the site or the premises to save electrical costs.

Turino et al. fail to teach a comparator object coupled to the database object, the comparator object periodically comparing the electrical usage information and a predefined electrical rate profile.

Ehlers et al. teach this feature (see col. 27, lines 5-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ehlers et al.'s teaching into Turino et al.'s invention, because comparing the electrical usage information and a predefined electrical rate profile would allow the user to determine the cost for operating appliances at a certain time of the day, also the user would determine the maximum and the minimum electrical cost for operating each appliance throughout the day. Therefore, the user would have a clearer idea on what

appliances should be used at a certain times period in order to use the power efficiently and save electrical costs.

Prior art

6. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Rodenberg, III et al. ['600] disclose programmable electricity consumption monitor.

Shincovich et al. ['179] disclose remote automatic meter reading apparatus.

Salas et al. ['391] disclose power managment control system.

Ehrke et al. ['577] disclose electronic meter for networked meter reading.

Swarztrauber et al. ['748] disclose method and apparatus for remote measurement.

Drees ['483] discloses real-time pricing controller of an energy storage medium.

Jones ['041] discloses residential heating, cooling and energy management system.

Alexander et al. ['267] disclose graphical energy information display system having a menu for user selection of energy related information for an AC load control device.

Colton ['574] discloses system and method for communication between remote locations.

Bearden et al. ['759] disclose electrical energy meters having real-time power quality measurement and reporting capability.

Borba ['994] discloses energy pay back building.

Reinke, Jr. ['404] disclose energy monitor.

Sworm [007] discloses portable electrical energy monitor.

Carr et al. ['320] disclose home energy monitoring and control system.

Yarbrough ['095] discloses electrical usage display system.

Burch ['308] discloses peak load control energy saving and cycling system.

Budike, Jr. ['105] discloses multi-utility energy control system.

Contact information


7. Any inquiry concerning this communication from examiner should be directed to Mohamed Charioui whose telephone number is 703 605-4362. The examiner can normally be reached Monday to Friday 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached at 703 308-1677. The fax phone number for the organization where this application is assigned is 703 305-3431.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose number is 703 308-0956.

Mohamed Charioui

6/13/03


MARC S. HOFF
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